

REMARKS

Applicant is in receipt of the Office Action mailed October 12, 2004. Claims 23, 25, 30, 36, 40, 43, 45, 46, 49, 54, 58, 59, 60, and 66 have been amended. Claims 23-67 remain pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Section 112 Rejections

Claims 25, 30, 36, 43, 49, 54, 60, and 66 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 25 and 49 have been amended to remove the term “substantial”.

Claims 30 and 54 have been amended to address the antecedent basis error regarding “the count register”.

Claims 36 and 60 have been amended to remove the term “scheduled”, thereby addressing the antecedent basis error regarding the “scheduled target function”.

The respective dependencies of claims 43 and 66 have been amended to address the antecedent basis error regarding “the original function”.

Removal of the Section 112 rejection of claims 25, 30, 36, 43, 49, 54, 60, and 66 is respectfully requested.

Section 102 Rejections

Claims 23, 26-28, 41-47, 50-52, and 64-67 were rejected under 35 U.S.C. 102(b) as being anticipated by Mulholland et al. (U.S. Pat. No. 5,654,905, “Mulholland”). Applicant respectfully traverses the rejection.

Amended claim 23 recites:

23. A method for a scheduled execution of a target function by a processor of a computer at predetermined times, wherein the processor comprises a first interrupt input operable to receive a first interrupt signal, the method comprising:

executing a start function, wherein the start function is executed by the processor as a first interrupt service routine, wherein the start function is executed in response to triggering of the first interrupt signal;

the start function repeatedly reading a computer register to obtain a read value;

the start function comparing the read value with a reference value, wherein the reference value corresponds to a predetermined time; and

the start function calling the target function when the read value corresponds to the reference value, wherein the start function calling the target function initiates said execution of the target function.

As the Examiner is certainly aware, anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner asserts that Mulholland teaches all the limitations of claim 23. Applicant respectfully disagrees. As Mulholland clearly states in col. 1, lines 7-11:

This invention relates to systems for tracking the amount of time a computer has been operating. More specifically, this invention relates to background executing programs that track the amount of time a computer has operated after it has been delivered to a new user.

Applicant notes that, as argued in the previous Response, which is hereby incorporated by reference, Mulholland fails to teach numerous limitations and features of claim 23. Applicant notes that the independent claims have been amended to clarify the idea that the start function actually *calls* the target function, as opposed to a timer function (DosTimer) simply setting a flag, as taught by Mulholland.

For example, nowhere does Mulholland teach or suggest a start function calling a target function *at a predetermined time*, i.e., “the start function calling the target function when the read value corresponds to the reference value”, and “where the reference value

corresponds to a predetermined time”. Rather, Mulholland teaches updating a log file *at predetermined intervals*, where the intervals are timed and counted with respect to arbitrary times at which the computer is started, which is quite different. For example, the DosTimer function described in column 6 does not poll the timer in order to determine a predetermined time but rather performs a countdown in order to determine whether the computer has been running for a given time interval. The DosTimer function sets a DoUpdateFile flag when the interval has elapsed, i.e., when the countdown reaches 0. Applicant notes that, contrary to the Examiner’s assertion, since the first countdown of the predetermined interval begins when the computer is turned on or booted, the lapse of each interval specifically does *not* correspond to a predetermined time. In citing col. 4, lines 23-24, the Examiner has attempted to equate a “predetermined time” with a “predetermined time interval”, which is improper. For example, specifying an interval of 30 minutes in no way specifies *when*, i.e., at *what time*, that interval occurs. Thus, Mulholland does not address the problem of executing a function at a predetermined time.

In addition, Applicant notes that Mulholland does not disclose a polling action triggered by an interrupt request, i.e., “executing a start function, wherein the start function is executed by the processor as a first interrupt service routine, wherein *the start function is executed in response to triggering of the first interrupt signal*; and *the start function repeatedly reading a computer register to obtain a read value*”. Column 6, lines 52-53 discloses that the DosTimer function decrements a TicksLeft variable before returning to the interrupt calling function. This means that the variable is decremented by one incremental unit "1" and then compared to a reference value "0". When the value 0 is reached certain program steps 310, 312, 314 and 316 are performed. If these program steps are performed or if the TicksLeft variable has not reached 0 the DosTimer function returns control to the interrupt calling function. Thus, the interrupt calling function does not trigger a repeated polling of a clock value but only decrements a variable by the value of "1".

As another example, the Office Action asserts that Mulholland teaches “the start function repeatedly reading a computer register”, citing col. 6, lines 52-53. However, the cited passage states:

If the DosTimerExecuting flag is not set, the DosTimer function then decrements the TicksLeft variable at a step 306, and then checks whether it has reached zero yet at a step 308.

No mention is made of the DosTimer function reading a computer register. In fact, no use of the term “register” may be found in the entire Mulholland reference.

Applicant also notes that whereas in claim 23, the start function itself calls the target function at the predetermined time, in Mulholland, the DosTimer function merely sets a flag when a counter decrements to zero, whatever time that may be. Thus, in Mulholland, not only does the DosTimer function *not* call the target function at a predetermined time, but the DosTimer function does not call the target function at all.

Thus, for at least the reasons provided above, Applicant respectfully submits that claim 23 and those claims dependent thereon are patentably distinct and non-obvious over Mulholland, and are thus allowable.

Claim 46 includes similar limitations as claim 23, and so the above arguments apply with equal force to that claim. Thus, Applicant respectfully submits that claim 46 and those claims dependent thereon are patentably distinct and non-obvious over Mulholland, and are thus allowable.

Removal of the 102(b) rejection of claims 23, 26-28, 41-47, 50-52, and 64-67 is respectfully requested.

Section 103 Rejections

Claims 24 and 48 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mulholland, in view of Chih-Hao Tsai (PCTimer: Millisecond Resolution Timing with DJGPP V2 and DPMI, “Tsai”). Applicant respectfully disagrees.

Claim 24 recites:

24. (Previously Presented) The method of claim 23, wherein the first interrupt signal is triggered by a timer, wherein the timer is programmed with the reference value by the start function.

To establish a prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. In re Bond, 910 F. 2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Moreover, as held by the U.S. Court of Appeals for the Federal Circuit in *Ecolochem Inc. v. Southern California Edison Co.*, an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis.

In addition, the showing of a suggestion, teaching, or motivation to combine prior teachings “must be clear and particular Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence’.” *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an initial suggestion to make the combination.

Applicant respectfully submits that neither Mulholland nor Tsai provides a motivation to combine. For example, nowhere does Mulholland teach or describe or even hint at a timer being programmed with a reference value by a start function, as the Examiner admits. Nor does Tsai suggest a start function programming a timer with a reference value. Applicant notes that the Examiner has apparently attempted to construct Applicant’s invention as represented by claim 24 by assembling select portions of the cited references, using claim 24 as a blueprint, which is clearly hindsight analysis, and is improper. Applicant further notes that the motivation to combine suggested by the Examiner, specifically, that “this would allow the timer interrupt to be triggered before a predetermined time, ensuring the target function gets executed at the predetermined time” is simply an improved result of the attempted combination, and so is not a proper motivation to combine. Applicant submits that neither Mulholland nor Tsai suggests or even hints at the desirability of this feature, and that the Examiner has improperly

constructed this feature, merely noting that a user *could* program a timer interrupt in Mulholland's system using Tsai's disclosed timer technology.

Applicant also notes that if a proposed modification would render the prior art feature unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900 (Fed. Cir. 1984). Applicant submits that since the purpose of Mulholland is to track and count the number of time intervals during which the computer is turned on, which could be at any time, programming the timer with a reference value corresponding to a predetermined time would not be useful, since that particular time has no bearing on when and whether the computer will be in operation. Thus, the Examiner's proposed combination of Mulholland and Tsai would actually teach away from Mulholland's intended purpose and operation. In other words, the Examiner's proposed modification of Mulholland would render Mulholland's system unsatisfactory for its intended purpose.

Thus, Applicant submits that combining Mulholland and Tsai is improper. Moreover, Applicant submits that even were Mulholland and Tsai properly combinable, which Applicant argues they are not, the resulting combination would still not produce Applicant's invention as claimed.

For example, neither Mulholland nor Tsai teaches or suggests the start function repeatedly reading a computer register and comparing the read value to a reference value corresponding to a predetermined time. Nor does Mulholland nor Tsai teach or suggest the start function calling the target function at the predetermined time, i.e., when the read value corresponds to the reference value. Rather Tsai is directed to an acceleration of the timer frequency for accurate polling under a 32-bit Windows operating system, and does not mention an interrupt request for starting the polling.

Thus, Mulholland and Tsai, taken singly or in combination, fails to teach or suggest these limitations.

Thus, for at least the reasons provided above, Applicant submits that claim 24 is patentably distinct and non-obvious over Mulholland in view of Tsai. Claim 48 includes similar limitations as claim 24, and so the above arguments apply with equal force to that claim. Thus, Applicant respectfully submits that claim 48 and those claims dependent

thereon are patentably distinct and non-obvious over Mulholland in view of Tsai, , taken singly or in combination, and are thus allowable.

Removal of the 103(a) rejection of claims 24 and 48 is respectfully requested.

Claims 25, 29-36, 39-40, 49, 53-60, and 63 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mulholland, in view of Lever (US patent 5,944,840, "Lever").

Claims 37-38, and 61-62 were rejected under 35 U.S.C. 103(a) as being unpatentable over Mulholland, in view of Lever, and further in view of Tsai.

Applicant respectfully disagrees.

Applicant submits that neither Mulholland nor Lever provides a motivation to combine. The Examiner asserts that Mulholland "discloses a method, wherein the first interrupt signal is triggered with a lead time before the predetermined time", citing col. 5, lines 27-29. Applicant can find no mention of this feature in Mulholland, nor its desirability.

Lever discloses a method for determining the time required for processing an interrupt service routine. Lever does not mention the problem of scheduled execution of a function or an interrupt triggered polling.

The motivation to combine indicated by the Examiner is "to have the lead time greater than the maximum delay, since this would guarantee the execution of the target function at the predetermined time". Applicant submits that the Examiner has merely cited a presumed improved result from the attempted combination, which is *not* a proper motivation to combine, but rather is simply hindsight analysis. Additionally, Applicant notes that since Mulholland does not teach execution of the target function at a predetermined time, but rather at the lapse of specified intervals which could occur at any time, and more specifically does not teach a start function calling the target function at the predetermined time, and since Lever also fails to teach these limitations, the alleged (and improper) combination also fails to provide these features and limitations.

Moreover, Applicant cannot see how Lever is supposed to anticipate the calculation of the lead-time necessary to ensure that the polling begins before the scheduled time value, i.e., before the predetermined time. Thus, Applicant respectfully

submits that even were Mulholland and Lever properly combinable, which Applicant argues they are not, the resulting combination would not produce Applicant's invention as claimed.

Thus, for at least the reasons provided above, Applicant submits that claim 25 and those claims dependent therefrom are patentably distinct and non-obvious over Mulholland and Lever, taken singly or in combination, and are thus allowable.

Claim 49 includes similar limitations as claim 25, and so the above arguments apply with equal force to that claim. Thus, Applicant respectfully submits that claim 49 and those claims dependent thereon are patentably distinct and non-obvious over Mulholland in view of Lever, taken singly or in combination, and are thus allowable.

Removal of the 103(a) rejection of claims 25 and 49 is respectfully requested.

Regarding the remainder of the dependent claim rejections, Applicant notes that since independent claims 23 and 46 have been shown above to be patentably distinct over the cited art, their respective dependent claims are also patentably distinct and non-obvious over the cited art.

Thus, Applicant respectfully requests removal of the 103 rejection of claims 25, 29-40, 49, 53- 63.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

In light of the foregoing amendments and remarks, Applicant submits the application is now in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-47700/JCH.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☒ Request for Continued Examination

Respectfully submitted,



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